

A NEW SPECIES OF *ZIGADENUS* (LILIACEAE) FROM EASTERN MEXICO

B.L. Turner

Department of Botany, University of Texas, Austin, Texas 78713 U.S.A.

ABSTRACT

A new species, *Zigadenus hintoniorum* B. Turner, is described from the Sierra Madre Oriental of eastern México. It is relatively common on Cerro Potosí, Nuevo León, from 2800-3800 meters. Previous workers have included these more eastern populations in *Z. virescens*, a less robust, smaller flowered species of the Sierra Madre Occidental. A key to the Mexican species of *Zigadenus* and a map showing the distribution of *Z. hintoniorum* in northeastern México are provided.

KEY WORDS: Liliaceae, *Zigadenus*, México

Routine identification of collections from northeastern México has revealed the following novelty.

*Zigadenus hintoniorum* B. Turner, *sp. nov.* TYPE: MEXICO. Nuevo León: Mpio. Galeana, Cerro Potosí, pine forest, 3700 m, 20 Jul 1969, George B. Hinton *et al.* 17200 (HOLOTYPE: TEX).

*Zigadeno virescenti* (Kunth) Macbr. similis sed robustioribus (0.4-2.0 m altis), tepalis majoribus, et bracteis inflorescentiae valde evolutis differt.

Robust herbs to 2 m high. Bulbs large ovoid, mostly 3-5 cm long. Leaves mostly 8-18 mm wide. Inflorescence a rather simple elongate raceme 30-40 cm long, often a few secondary branches arising at the base. Pedicels stout, when fully flowered mostly 10-20 mm long, the subtending green bracts mostly large, one half or more as long as the pedicels. Tepals reportedly "greenish-yellow," "creamy-yellow," "creamy-white," or "white with green lines," these mostly elliptic oblong to oblong, 5-7 mm long, (2.0-)2.5-3.5 mm wide. Stamens with

filaments mostly 5-7 mm long, the anthers only slightly exerted beyond the tepals. Capsule 12-15 mm long, 5-7 mm wide.

ADDITIONAL SPECIMENS EXAMINED: MEXICO. Coahuila: Sierra Los Camargos, 2840 m, 19 Jul 1980, *Hinton et al. 17880* (TEX); Sierra del Coahuilón, 3260 m, 30 Jun 1985, *Hinton et al. 18897* (TEX); Sierra Zapaliname, 2985 m, 9 Aug 1991, *Hinton et al. 20501* (TEX); Sierra La Marta, ca. 3589 m, 16 Jun 1985, *McDonald 1439* (TEX); Sierra Coahuilón, 3400-3500 m, 18 Jun 1985, *McDonald 1522* (TEX); Sierra La Marta, ca. 3600 m, 21 Jul 1985, *McDonald 1718* (TEX); Sierra La Viga, ca. 3700 m, 22 Aug 1985, *McDonald 2118* (TEX). Nuevo León: Mpio. Galeana, Cerro Potosí, ca. 3020 m, 25 Jun 1990, *Beaman 3304* (TEX); Cerro Potosí, ca. 3000 m, 27 Aug 1987, *Bogler 177* (TEX); Cerro Potosí, ca. 3500 m, 19 Jun 1966, *Gilbert 51* (TEX); Cerro Potosí, 3700 m, 6 Jul 1969, *Hinton et al. 17150* (TEX); San José Las Joyas, 2780 m, *Hinton et al. 18580* (TEX); Mpio. Aramberri, Cerro Grande, 3800 m, 14 Sep 1986, *Hinton et al. 19047* (TEX); Cerro Potosí, 2 mi below summit by road, 23 Aug 1984, *Lavin 4792* (TEX).

*Zigadenus hintoniorum* belongs to the section *Anticlea* of *Zigadenus* as treated by Preece (1956). He recognized three species of this section as occurring in North America south of the U.S.A. border. They are *Z. volcanicus* Benth. (from Guatemala), *Z. elegans* Pursh (including *Z. gracilentus* E. Greene and *Z. mohinorensis* Greenm.), and *Z. virescens* (including *Z. mexicanus* Hemsl.). All of the material which I have referred to *Z. hintoniorum* was placed by Preece in *Z. virescens*. However, he noted that most of the material from eastern México resembles *Z. volcanicus* in having thick pedicels. "The flower, however, is nodding like typical *virescens*. More investigation is necessary to clarify their status." Abundant recent collections of *Zigadenus* from the higher peaks of the Sierra Madre Oriental of eastern Coahuila and southern Nuevo León has convinced me that these plants are readily separable by the combination of key characters given below, and that these populations tend to stand somewhere between *Z. virescens* of western México and *Z. volcanicus* of Guatemala.

Preece (1956) thought the type of *Zigadenus virescens* was from the state of San Luis Potosí, but as noted by McVaugh (1989), it is actually from western México in the state of Guanajuato. Preece did examine a few sheets of what he took to be *Z. virescens* from the state of San Luis Potosí collected by Schaffner, and these are probably referable to *Z. hintoniorum* of the present treatment. This would also apply to the few sheets he cited as occurring in the state of Tamaulipas and those from Cerro San Felipe of northern Oaxaca.

Additional collections from eastern México brought to the fore since the study by Preece include also the following: Hidalgo: Depto. Hidalgo, 7000 ft., *Case et al. 323* (TEX) this specimen appears to be *Zigadenus virescens* but it is apparently an aberrant form of *Z. hintoniorum*; in fact, the plant concerned might be a cultivar or introduction from elsewhere since it was found "around



Fig. 1. Distribution of *Zigadenus hintoniorum* in NE Mexico

an old abandoned rock house." Oaxaca: 2.7 mi S of Llano de las Flores, ca. 56 mi N of Cd. Oaxaca along the road to Tuxtepec, B. Turner 15187 (TEX) this plant appears to be typical of *Z. hintoniorum* and presumably would match the sheets from Oaxaca cited by Preece, all of these from an area north of Cd. Oaxaca.

I have mapped in Figure 1 only those specimens from northeastern México on file at TEX. As noted in the above, collections of this taxon have presumably also been made in the states of Tamaulipas, San Luis Potosí, Hidalgo, and Oaxaca, to judge from the citations of Preece.

In summary, *Zigadenus virescens* appears to be largely restricted to the mountainous areas of western México, extending northward into the western U.S.A.; *Z. elegans* is largely a Rocky Mountain element of the western U.S.A. and Canada, extending into northcentral México; *Z. hintoniorum* appears to be largely restricted to montane areas of eastern México from central Nuevo León southward to Oaxaca. These several taxa, all belonging to the section *Anticlea* can be distinguished by the following key.

KEY TO MEXICAN AND GUATEMALAN SPECIES OF *ZIGADENUS*,  
SECT. *ANTICLEA*

1. Tepals at anthesis 14-15 mm long; Guatemala. .... *Z. volcanicus*
1. Tepals at anthesis 4-10 mm long. .... (2)
  2. Flowers at anthesis mostly borne on short erect pedicels; Sonora, Chihuahua, Coahuila, northern Durango. .... *Z. elegans*
  2. Flowers at anthesis mostly borne on reflexed or recurved pedicels; widespread. .... (3)
3. Tepals mostly 1.5-2.5 mm wide; bracts of the inflorescence mostly 1/4 or less as long as the subtended pedicels; western México. ... *Z. virescens*
3. Tepals mostly 3.0-3.5 mm wide; bracts mostly 1/2 or more as long as the subtended pedicels; northeastern México southward to Oaxaca. ....  
..... *Z. hintoniorum*

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